

# Zambia - Innovation Grant - MECB Grantee

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# Overview

## Identification

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### COUNTRY

Zambia

### EVALUATION TITLE

Innovation Grant - MECB Grantee

### EVALUATION TYPE

Independent Performance Evaluation

### ID NUMBER

DDI-MCC-ZAM-IGP-MECB-2017-v01

## Version

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### VERSION DESCRIPTION

- v01: Edited, anonymous dataset for public distribution.

## Overview

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### ABSTRACT

Approximately 6,000 households in Jack compound, a peri-urban community in Lusaka, Zambia rely on Lusaka Water and Sewerage Company (LWSC) for their water provision. LWSC struggles to meet this demand due to its decaying water distribution infrastructures and intermittent cuts to electricity. Therefore, water accessibility and quality are major challenges in the compound, burdening residents with unproductive time usage (mostly on women who are forced to wait in long queues to fetch water), decreasing water accountability, increasing residents' risk of water-borne diseases and forcing them to turn to private water vendors.

As a response to these challenges, MECB formed a Public-Private Partnership (PPP) with LWSC to implement MECB's Smart Safe Water Supply Scheme-Scaling Up (SSWS-SU) project. It aims to address these challenges by digging "high yield" boreholes to increase the amount of water to be pumped, by installing solar pumps to enable 24/7 availability of water, by rehabilitating the existing water distribution piping system and by installing new water kiosks with an innovative dispensing machine that works with unique non-cash tokens to help ensure accountability.

The purpose of the performance evaluation of MECB's Smart Safe Water Scheme Scaling Up (SSWS-SU) Project is to examine how SSWS-SU is performing in relation to its key objectives, which are: (1) to increase access to potable water in Jack compound, (2) to increase time savings through shorter wait times at water kiosks, (3) to increase transparency and equity of water fees, and (4) to increase water revenue. Initial conditions of water access and water use in Jack compound, project implementation, activities, and outputs are also examined to understand the performance and dynamics of the SSWS-SU project. AIR used a qualitative methodological approach to investigate the fidelity of project implementation and the ways in which deviations in implementation affected expected project outputs. We also explored changes in key outcomes of interest (e.g., increased access to potable water, shorter wait times at water kiosks, etc.), although the outcome analysis was descriptive rather than causal. This baseline evaluation report provides results on program implementation and performance prior to the commencement of water distribution by MECB. In addition, the evaluation aims to document lessons learned and best practices related to the implementation of water distribution projects and the efficacy of Public-Private Partnerships (PPPs) in water management.

The research questions driving this evaluation fall into three main areas: (1) the enabling environment (2) the implementation process (3) sustainability. Research questions per each evaluation area are:

#### Area 1: Enabling Environment

##### A. Public Private Partnerships

- Who are the relevant actors and/or organizations that shape access to water in Jack compound? How do these actors and/or organizations impact how residents access water?

- How did MECB establish its partnership with LWSC? How, if at all, did MECB work with other key actors relevant to water access in Jack to establish the project? What challenges, if any, did MECB face in securing this/these partnership(s) and how were they resolved?

## B. Access to Water and Usage Behaviors

- From where do select Jack residents get their water at baseline? How do Jack residents initially perceive water accessibility, affordability, and reliability? How do residents perceive access for the most vulnerable (e.g., those who are physically disabled or those in low socio-economic status households)?
- What are the perceptions of water quality at baseline?
- What are the costs associated with transporting the water from the MECB kiosk to homes for select residents?
- How do households transport, handle, and store water at baseline?
- For households with private taps, how is water distributed/sold among family friends, neighbours, and other residents?
- What are the water usage patterns and/or behaviors of select Jack residents at baseline?

## Area 2: Implementation Process

### A. Token System

- At baseline, what are the anticipated outcomes of the token system among respondents? What are respondents' perceptions and recommendations for improvement of the token system at baseline? What are respondents' perceptions of the sustainability of the token system at baseline?

### B. Implementation Challenges

- How, if at all, did the implementation process differ from the original plan proposed by MECB (in the IGP grant contract)?
- Are there any unintended consequences of the SSWS-SU project within Jack compound?

## Area 3: Sustainability

- How does MECB plan to shift maintenance responsibilities to residents of Jack compound? Is this plan feasible? Why or why not?
- Does MECB think that the revenue sharing agreement with LWSC is economically viable? Why or why not? How do MECB and LWSC view the sustainability of the private commercial provision of water?

Summary (purpose, nature, scope, special content characteristics) of different areas of evaluation:

The evaluation questions were investigated using several qualitative methods, including an actor mapping exercise with SSWS-SU stakeholders, key informant interviews (KIIs) with MECB and LWSC officials, other relevant officials, and water providers, and focus group discussions (FGDs) with Jack residents. Data collected through these methods were bolstered by and triangulated with official project documents obtained from MECB and Millennium Challenge Account-Zambia (MCA-Z).

The evaluation of the enabling environment aims to establish a deep understanding of the initial conditions and enabling environment of Jack compound to inform MECB's program activities and prospects for sustainability. The evaluation of the implementation process provides a preliminary analysis of MECB's implementation of the SSWS-SU project. An assessment of Jack residents' perceptions of SSWS-SU's new token system will help identify the challenges and facilitators to residents' potential uptake. Further, this area evaluation provides an overview of the implementation challenges that MECB faced while constructing the project's physical infrastructure, sensitizing the Jack community, and mitigating the potential social and environmental risks of the intervention. The last area of evaluation, sustainability assesses the feasibility of MECB's strategy to ensure the SSWS-SU project's sustainability. We examine the extent to which MECB has built community buy-in and ownership over the project's assets and operations and also assess the revenue sharing agreement between MECB and LWSC, and finally also assess whether the PPP is built upon a sustainable economic model.

Summary (purpose, nature, scope, special content characteristics) of data collection:

1. Actor Mapping: Actor maps are "visual depiction[S] of key organizations and/or individuals that make up and/or influence a system, as well as their relationships to a given issue and to one another." This was conducted to better understand the relevant actors in the local water sector, their relationships to one another, their interests and their broader influence in shaping water disbursement processes within Jack compound.

2. KIIs: KIIs with different individuals were conducted to gather information on different research questions.

- KII with MCA-Z staff focused on implementation challenges and successes, the process of engaging local stakeholders, institutional and political structures and support and program sustainability.

- KII with MECB staff focused on the planning and initial implementation process including the main challenges encountered, how MECB overcame these challenges, its process of engaging local partners, and the perceived sustainability of its PPP with LWSC.

- KIIs with LWSC officials focused on the nature of LWSC's collaboration with MECB including its initial discussions, staff perspectives on the PPP model, LWSC's current role and mode of engaging with MECB during implementation, challenges and successes throughout implementation, and LWSC's thoughts on the most feasible plans for sustaining this initiative.

- KII with NWASCO focused on issues related to water access, quality, affordability, as well as residents' collection and usage patterns. AIR also inquired about PBOs perceptions and expectations regarding the SSWS-SU project and the potential implications it might bring to their businesses.

- KIIs with private borehole owners (PBOs) focused on issues related to water access, quality, affordability, as well as residents' collection and usage patterns. AIR also inquired about PBOs perceptions and expectations regarding the SSWS-SU project and the potential implications it might bring to their businesses.

- KIIs with community leaders focused on how the community might be affected by the SSWS-SU project's innovations. Specifically, we asked community leaders to provide their perspective on past and current water quality, community level factors that might shape project implementation, and their thoughts on SSWS-SU's prospects for sustainability.

3. FGDs: This was conducted to understand Jack residents' WASH related perceptions and behaviours at baseline and to gauge their level of sensitization regarding the SSWS-SU project. The FGDs with residents enabled AIR to examine similarities and differences among residents who fetch and use water from different sources and how these choices might affect their perceptions about water accessibility and quality.

## EVALUATION METHODOLOGY

Other (Performance Evaluation)

## UNITS OF ANALYSIS

Individuals

## KIND OF DATA

Sample survey data [ssd]

## TOPICS

Topic	Vocabulary	URI
Water, Sanitation and Hygiene	MCC Sector	

## KEYWORDS

Public Private Partnership, Innovation, Water Access, Water Quality, Water Reliability, Zambia, Peri-urban Areas

## Coverage

### GEOGRAPHIC COVERAGE

Grants awarded under the IGP will be implemented in urban and peri-urban areas of Lusaka. The Government of the Republic of Zambia identified water, sanitation, and drainage as key issues in the capital city of Lusaka, which is why the compact and the IGP target these areas.

Specifically for this evaluation, it was conducted in the peri-urban slum area called Jack Compound, Lusaka, Zambia.

**UNIVERSE**

The population for the actor mapping included eight key stakeholders: 3 LWSC officials, 3 private borehole owners and 2 residents

The population for Key Informant Interviews: 2 LWSC officials, 4 private borehole owners, 1 MCA-Z staff, 2 MECB staff, 1 NWASCO staff, 2 community leaders

The population for focus group discussions: LWSC and PBO customers, private borehole-only customers , LWSC-only Jack customers and members from the Project Task Team

All population members were adults and consented to the interviews.

## Producers and Sponsors

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**PRIMARY INVESTIGATOR(S)**

Name	Affiliation
American Institutes for Research	

**FUNDING**

Name	Abbreviation	Role
Millennium Challenge Corporation	MCC	

## Metadata Production

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**METADATA PRODUCED BY**

Name	Abbreviation	Affiliation	Role
American Institutes for Research	AIR		Independent Evaluator

**DATE OF METADATA PRODUCTION**

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**DDI DOCUMENT VERSION**

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## MCC Compact and Program

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**COMPACT OR THRESHOLD**

Zambia Compact

**PROGRAM**

MCA-Z supports the implementation of water supply, water quality, sanitation, and hygiene interventions under the Lusaka Water Supply Sanitation and Drainage Project (LWSSD). The objective is to expand access to, and improve the reliability of, water supply and sanitation, and to improve drainage services in select urban and peri-urban areas of the city of Lusaka. The program logic suggests that these improvements will in turn decrease the incidence of waterborne and water-related diseases (such as diarrhea), generate time savings for households and businesses, and reduce nonrevenue water in the water supply network. The project focuses specifically on investments in (1) infrastructure development and rehabilitation, and (2) the provision of technical assistance to the Lusaka Water and Sewerage Company (LWSC; the provincial utility responsible for the management of Lusaka's WASH assets and the provision of WASH services) and the Lusaka City Council (LCC; the government entity that manages the city's drainage infrastructure and services). The technical assistance component includes the IGP, of which AIR is conducting a performance evaluation. The IGP is intended to increase and sustain the benefits of the MCC Compact investments in Zambia by supporting innovative projects that achieve Compact and IGP goals. Under the IGP, Zambian Breweries was selected as one of five grantees during the first grant cycle, and it began implementation of the Manja Pamodzi solid waste management program shortly after receiving the grant award in 2015.

**MCC SECTOR**

Water, Sanitation and Hygiene (WASH)

# Sampling

## Study Population

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The population for the actor mapping included eight key stakeholders: 3 LWSC officials, 3 private borehole owners and 2 residents. The population for Key Informant Interviews: 2 LWSC officials, 4 private borehole owners, 1 MCA-Z staff, 2 MECB staff, 1 NWASCO staff, 2 community leaders. The population for focus group discussions: LWSC and PBO customers, private borehole-only customers, LWSC-only Jack customers and members from the Project Task Team. All population members were adults and consented to the interviews.

## Sampling Procedure

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The sample for the actor mapping included 8 stakeholders: 3 LWSC officials, 3 private borehole owners and 2 Jack residents. These stakeholders were selected by AIR because they had a range of experiences and occupied different roles within the water provision system.

Next the sample for the KIIs, were informed by the results from the actor mapping and from input from the local partners. AIR identified individuals who occupied key positions that were relevant to the overall research questions and study aims. These stakeholders were also central to the implementation of MECB's program and were individuals occupying key positions in agencies responsible for water provision, and local community leaders. The sample for the KIIs included 12 key informants: 2 LWSC officials, 4 private borehole owners, 1 MCA-Z staff, 2 MECB staff, 1 NWASCO staff, 2 community leaders. (n = 12)

Finally, for FGDs, AIR utilized purposive sampling techniques to recruit FGD participants. Data collectors from AIR liaised with a local LWSC official to identify and recruit residents who live in areas that are serviced by LWSC's existing water distribution infrastructure and those residents who lived in parts of the compound that did not have easy access to LWSC provided water. The sample framework was also designed to capture the diversity of perspectives between those who had relatively good access to water and those who did not. The sample for the FGDs included residents from Jack compound: LWSC and PBO customers, private borehole-only customers, LWSC-only Jack residents and an FGD with the Project Task Team. The samples comprised of mostly women due to their conventional role as the household's primary water collector. The total number of participants across 11 FGDs was (n= 62) residents.

## Weighting

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N/A

# Questionnaires

## Overview

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The collector survey was a structured questionnaire with a total of nine sections, which were : 1) general demographic information about collectors; 2) collector tenure in Manja Pamodzi and reasons for joining and leaving the program; 3) training received and training quality; 4) collector's standard of living; 5) the experience working with aggregators and the different materials and respective weights collected by the collector; 6) a typical working week for the collector; 7) collectors' employment outside of Manja Pamodzi; 8) collectors' income and various monthly expenditures; and 9) the perceptions of waste collectors and waste collection as an occupation. The questionnaire was administered to the participant by a trained enumerator after getting consent from the participant and each interview lasted about thirty to sixty minutes.



## Data Collection

### Data Collection Dates

Start	End	Cycle
2017-07-12	2017-08-02	N/A
2018-06-04	2018-08-06	N/A

### Data Collection Mode

Enumerators would identify respondents and then find a comfortable place to sit and conduct the interview. The enumerators used a specific protocol developed for each type of respondent and made notes while interviewing. For the actor-mapping exercise, photos of the actor maps were captured and downloaded on to an AIR-approved laptop. There was also a note taker at some interviews and the interviews and discussions were audio-recorded. The audio-based data was eventually transcribed.

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### Data Collectors

Name	Abbreviation	Affiliation
Palm Associates		

## Data Processing

No content available

## Data Appraisal

No content available